

(12) UK Patent Application (19) GB (11) 2 406 051 (13) A

(43) Date of A Publication 23.03.2005

(21) Application No: 0417980.0
(22) Date of Filing: 12.08.2004
(30) Priority Data:
(31) 0318875 (32) 12.08.2003 (33) GB

(51) INT CL⁷:
G09F 7/04, A47G 1/17

(52) UK CL (Edition X):
A4X X14
H1P PGXC

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(58) Field of Search:
UK CL (Edition X) A4X, H1P
INT CL⁷ A47G, B44C, G09F
Other: Online: WPI, JAPIO, & EPODOC

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(54) Abstract Title: **Apparatus to releasably hold and display sheet material**

(57) The invention relates to apparatus (10) for releasably holding and displaying a sheet material (20) such as a photograph or a sheet of paper. The apparatus (10) comprises a housing (11) which includes at least one wall (11a) defining a substantially planar sheet receiving surface. The apparatus (10) further comprises a magnet (13) which is fixed to the interior surface of the sheet receiving surface. A metallic member (14) is magnetically cooperable with the magnet (13) to thus hold and display the sheet material (20). The housing (11) may include a ballasting material (12) to stabilise the apparatus (10) in use. Alternative embodiments of the invention allow it to be mounted on a metallic surface such as a household radiator via a further magnet (40). The apparatus (10) may also be wall mounted via nail or screw heads which pass through an aperture (50).

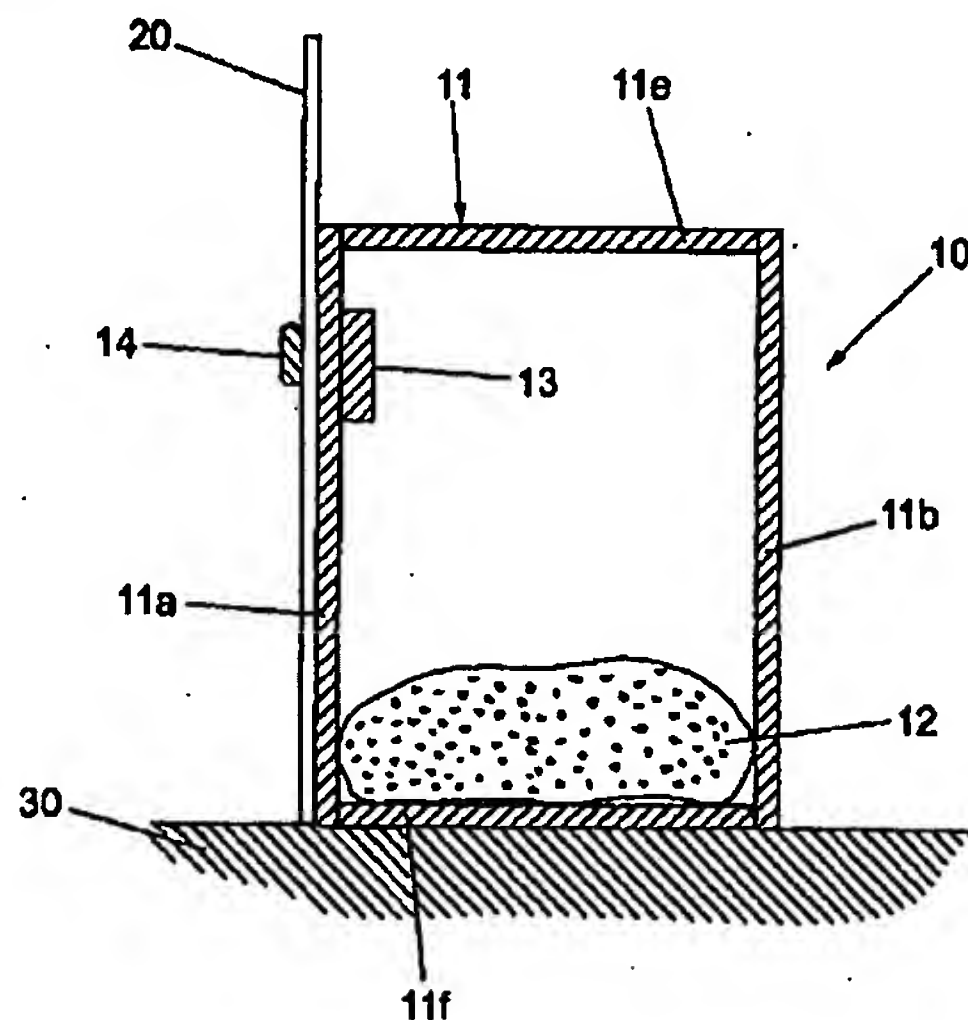


Fig. 1

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

This print takes account of replacement documents submitted after the date of filing to enable the application to comply with the formal requirements of the Patents Rules 1995

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1 **Apparatus Adapted to Releasably Hold and Display**
2 **Sheet Material**

3

4 The invention relates to apparatus adapted to
5 releasably hold and display sheet material,
6 particularly, but not exclusively, to apparatus
7 adapted to releasably hold and display photographs
8 or sheets of paper.

9

10 Devices for holding and displaying objects are
11 known. For example, conventional photograph frames
12 comprise a rigid back plate, which is often made of
13 hardboard, a front plate of the same size as the
14 back plate and clamping means to attach the front
15 plate to the back plate. Generally, a deployable
16 stand is pivotally connected to the back plate.
17 When deployed, the stand allows the photograph frame
18 to be supported on a surface, such as a table top.

19

20 Such devices typically suffer from several
21 disadvantages. For example they tend to lack
22 stability and the replacement of photographs or the

1 like is time consuming and involves numerous steps,
2 i.e. removing the clamping means, separating the
3 front plate from the back plate, removing the
4 photograph, inserting a new photograph, maintaining
5 the new photograph in position whilst repositioning
6 the front plate on the back plate and re-clamping
7 the front and back plates together.

8
9 According to the present invention, there is
10 provided apparatus adapted to releasably hold and
11 display sheet material comprising a base member and
12 at least one sheet receiving surface for receiving
13 at least a portion of a surface of sheet material to
14 be held and displayed; wherein the apparatus further
15 comprises at least one magnet and at least one
16 corresponding metallic member, the or each metallic
17 member being magnetically cooperable with its
18 corresponding magnet to thus hold and display the
19 sheet material.

20
21 Preferably, the or each sheet receiving surface is
22 substantially planar.

23
24 Preferably, the or each sheet receiving surface
25 forms part of a hollow housing having both exterior
26 and interior surfaces.

27
28 Preferably, the hollow housing defines a six sided
29 closed-wall structure.

30
31 Preferably, the magnet is fixed to the interior
32 surface of the sheet receiving surface.

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1
2 Optionally, a further magnet is fixed to an interior
3 surface, said further magnet allowing the apparatus
4 to be magnetically mountable on a metallic surface.
5
6 Optionally, an opening is formed in the housing.
7
8 Preferably, the opening comprises a circular portion
9 and a slot portion.
10
11 Preferably, the metallic member is a ball bearing.
12
13 Alternatively, the metallic member is a coin.
14
15 Preferably, ballasting material is provided to
16 stabilise the apparatus.
17
18 Optionally, the ballasting material is sand.
19
20 Alternatively, the apparatus is stabilised by virtue
21 of the density of the material from which the
22 apparatus is made.
23
24 Preferably, at least one of the sheet receiving
25 surfaces is inclined.
26
27 Preferably, the or each metallic member is
28 magnetically cooperable with its corresponding
29 magnet to thus hold and display sheet material
30 between the metallic member and the magnet.
31

1 Alternatively, the or each metallic member is
2 fixable to the rear surface of the sheet material to
3 be held and displayed such that, when the sheet
4 material is held and displayed, the metallic member
5 is not visible.

6

7 Embodiments of the present invention will now be
8 described, by way of example only, with reference to
9 the accompanying drawings, in which:

10

11 Fig. 1 is a cross-sectional side view of the
12 apparatus holding and displaying a sheet material;

13

14 Fig. 2 is a cross-sectional front view of the
15 apparatus without the sheet material;

16

17 Fig. 3 is a perspective view of the apparatus in a
18 partially disassembled state;

19

20 Fig. 4 is a view corresponding to that of Fig. 1 in
21 which the metallic member is not visible when the
22 sheet material is held and displayed;

23

24 Fig. 5 is a cross-sectional side view of an
25 alternative embodiment wherein the apparatus is
26 magnetically mounted on a household radiator;

27

28 Fig. 6a is a cross-sectional side view of a further
29 alternative embodiment wherein the apparatus is
30 supported on a wall via and screw or nail; and

31

1 Fig. 6b is a rear view of the apparatus of Fig. 6a
2 showing the shape of the opening through which a
3 screw or nail head is received.
4
5 Fig. 1 shows apparatus 10 for holding and displaying
6 sheet material 20. The sheet material 20 may be of
7 any height and width and may be in the form of, for
8 example, a photograph, a post-card, playing cards,
9 business cards or, more generally, a piece of paper.
10
11 The apparatus comprises a housing 11, a ballasting
12 material 12, a magnet 13 and a metallic member 14.
13 The housing 11 has both exterior and interior
14 surfaces defining a hollow six sided closed-wall
15 structure. The housing comprises four substantially
16 vertical walls being a front wall 11a, a back wall
17 11b and two lateral walls 11c, 11d (see Fig. 2).
18 The housing further comprises two substantially
19 horizontal walls, a lid 11e and a base member 11f,
20 which close the housing at its upper and lower ends.
21 Each wall of the housing 11 is substantially planar.
22
23 The front wall 11a defines a substantially vertical
24 sheet receiving surface. It will however be
25 appreciated that the sheet receiving surface can be
26 adapted to be inclined at any desired angle
27 depending upon the specific requirements of the
28 apparatus. Typically, the angle of the incline will
29 fall within the range of 0 to 20 degrees from the
30 vertical, for example, for use in holding sheet
31 material in the form of reading material.
32

1 As shown in Fig. 2, the walls are fastened together
2 using fixing elements 15 such as screws.
3 Alternatively or additionally, the walls may be
4 moulded integrally and/or fixed together by means of
5 a suitable adhesive. The material or materials from
6 which the housing is made may be chosen from a range
7 of material having the appropriate physical
8 properties (such as sufficient rigidity), for
9 example, woods, metals or plastics material. A tin
10 housing has been found to be particularly
11 advantageous because this dispenses with the need to
12 fix the magnet(s) to the interior surface(s) by
13 means of adhesive.

14
15 In the example shown in the drawings the ballasting
16 material 12 is a plastic bag filled with sand or an
17 aggregate. The ballasting material 12 is placed
18 within the housing 11 and rests on the horizontal
19 base member 11f in order to stabilise the housing
20 11. However, the ballasting material may instead be
21 in the form of a piece of wood, a piece of plastics
22 material or any other suitable material having a
23 sufficient weight to stabilise the housing 11 in
24 use. Moreover, the weight of the housing 11 itself
25 may be sufficient to stabilise it during use thereby
26 dispensing with the need to provide a separate
27 ballasting material.

28
29 As shown in Figs 1 and 2, the magnet 13 is attached,
30 for example glued, to the interior surface of the
31 sheet receiving surface 11a. The magnet 13 may be
32 of any shape but includes, advantageously, a flat

1 portion facilitating its fixing to the interior
2 surface of the sheet receiving surface 11a.

3
4 The metallic member 14 is preferably in the form of
5 a small piece of metal which is magnetically coupled
6 to the magnet 13. The attracting magnetic force of
7 the magnet 13 is sufficient to maintain the metallic
8 member 14 in place on the sheet receiving surface
9 11a. The metallic member may be a coin, such as a
10 British one pence coin (produced after September
11 1992) or British one pound coin. Equally of course,
12 it may be a coin from any country and of any value
13 which comprises a high degree of metal to facilitate
14 its magnetic attraction to the magnet 13. In
15 another example, the metallic member 14 is in the
16 form of a spherical ball bearing which can also be
17 maintained in position on the sheet receiving
18 surface 11a of the housing 11. In a further
19 example, the metallic member 14 is in the general
20 shape of a drawing pin having a curved circular part
21 and a stem extending therefrom. The stem allows a
22 user to manually grip and remove the metallic member
23 14 from the sheet receiving surface 11a.

24
25 The apparatus according to the invention is
26 assembled as follows. The side walls 11a, 11b, the
27 lateral walls 11c, 11d and the base member 11f are
28 screwed together (as shown in Fig. 2).
29 Alternatively the housing is formed of a moulded
30 open box 111a with a lid 111b (as shown in Fig. 3).
31 The ballasting material (in this case a sand bag 12)
32 is then placed between the lateral walls, onto the

1 base member 11f. The sand bag 12 may be deformed to
2 facilitate its introduction between the front wall,
3 the back wall and the two lateral walls. The magnet
4 13 is then fixed to interior surface of the sheet
5 receiving surface 11a. The upper wall 11e is then
6 screwed to the lateral walls. Alternatively, in the
7 embodiment of Figure 3, the lid 111b may be glued
8 flush with the open box 111a. The metallic element
9 14 is placed on the outside of the sheet receiving
10 surface 11a, in a position which corresponds to that
11 of the of the magnet 13.

12

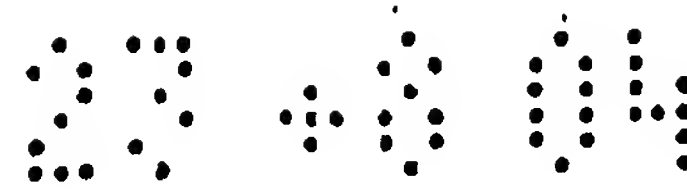
13 The apparatus may then be placed on a supporting
14 surface such as a table top 30 with the weight of
15 the bag of sand 12 acting to stabilise the
16 apparatus.

17

18 When a user wishes to hold and display a piece of
19 sheet material such as a photograph, the metallic
20 member 14 is, if necessary, detached from the sheet
21 receiving surface 11a of the housing 11 and the
22 sheet material to be held and displayed is applied
23 to the sheet receiving surface 11a. The metallic
24 member 14 is then replaced to hold the sheet
25 material in position. At least a portion of the
26 surface of the sheet material is positioned against
27 the sheet receiving surface 11a and is interposed
28 between the magnet 13 and the metallic element 14.

29

30 In an another arrangement shown in Fig. 4, the
31 metallic member 14 may be fixed to the rear surface
32 of the sheet material to be held and displayed, for



1 example, by means of adhesive. An advantage of this
2 arrangement is that the metallic member is not
3 visible to the viewer and the front surface of the
4 sheet material is not damaged by the metallic
5 member. This arrangement may be particularly
6 suitable for use with photographs, paintings and
7 drawings.

8
9 In an alternative embodiment shown in Fig. 5, a
10 further magnet 40 is fixed to the interior surface
11 of the housing which lies opposite the interior
12 surface on which magnet 13 is mounted. Accordingly,
13 the housing 11 can be mounted on a metallic surface
14 such as a household radiator instead of being
15 supported on a surface such as a table top 30 (as
16 shown in Figs. 1 and 2). In such an arrangement it
17 would not be necessary to use ballasting material
18 because the magnetic attraction of the further
19 magnet 40 to the metallic surface would be
20 sufficient to stabilise the housing 11. A further
21 magnet may optionally be fixed to the interior
22 surface of the base member 11f in order to
23 facilitate the mounting of the housing 11 on a
24 metallic surface.

25
26 In a further alternative embodiment shown in Fig.
27 6a, an aperture 50 is formed centrally through the
28 wall of the housing 11 which is opposite the surface
29 on which magnet 13 is mounted. The aperture 50
30 comprises a circular portion and a slot portion
31 which, taken together are in the general shape of an
32 inverted keyhole (see Fig. 6b). The circular

1 portion is dimensioned to receive the head of a wall
2 mounted screw or nail and the slot portion is
3 dimensioned to sufficient to receive the stem of a
4 screw or nail whilst not allowing the head of the
5 screw or nail to pass through it. Accordingly, the
6 housing 11 may be mounted onto a wall via the screw
7 or nail head. Once the screw or nail head is
8 introduced through the circular portion of the
9 aperture 50, the housing 11 is lowered such that the
10 stem portion of the screw or nail is received in the
11 slot portion of the opening thus securing the head
12 portion behind the narrower slot portion. Again,
13 the use of a ballasting material may not be
14 necessary.

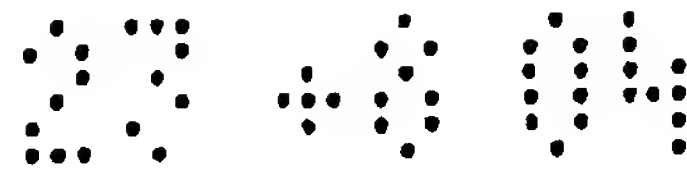
15
16 It will be appreciated that using a ball bearing as
17 a metallic element presents some advantages. For
18 example, the sheet material 20 to be held and
19 displayed may be repositioned on the sheet receiving
20 surface 11a of the housing 11 without the need to
21 first detach the ball bearing from the magnet 13.
22 This is because the spherical surface of the ball
23 bearing allows it to rotate to the position closest
24 to the magnet 13. Also, the sheet material 20 may
25 be removed from the device without the need to
26 remove the ball bearing and a new sheet material may
27 be quickly and easily loaded onto the sheet
28 receiving surface 11a using the same method.

29
30 While the invention has been described in
31 conjunction with the exemplary embodiments described
32 above, modifications and variations will be apparent

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1 to those skilled in the art without departing from
2 the scope of the invention. For example, the
3 housing wall need not be planar and the housing may
4 be of any shape. Also, additional magnets could be
5 added on the same or different walls to hold
6 additional objects or sheets of material. For
7 example, for supporting two or more pictures or
8 pieces of reading material. It will also be
9 appreciated that the magnetic force may be adapted
10 to be sufficient to hold several sheets of material
11 which are stacked together, i.e. a number of sheets
12 of paper or cards etc.

13
14 Moreover, the apparatus may be used to hold cut-out
15 profiles or sheet materials which have been adapted
16 to have three dimensional surface qualities.
17
18 The apparatus may also be adapted to hold a mobile
19 telephone whilst it is charging.

1 CLAIMS

2

- 3 1. Apparatus adapted to releasably hold and
4 display sheet material comprising a base member
5 and at least one sheet receiving surface for
6 receiving at least a portion of a surface of
7 sheet material to be held and displayed;
8 wherein the apparatus further comprises at
9 least one magnet and at least one corresponding
10 metallic member, the or each metallic member
11 being magnetically cooperable with its
12 corresponding magnet to thus hold and display
13 the sheet material.

14

- 15 2. Apparatus according to claim 1, wherein the or
16 each sheet receiving surface is substantially
17 planar.

18

- 19 3. Apparatus according to claim 1 or 2, wherein
20 the or each sheet receiving surface forms part
21 of a hollow housing having both exterior and
22 interior surfaces.

23

- 24 4. Apparatus according to claim 3, wherein the
25 hollow housing defines a six sided closed-wall
26 structure.

27

- 28 5. Apparatus according to claims 3 or 4, wherein
29 the magnet is fixed to the interior surface of
30 the sheet receiving surface.

31

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- 1 6. Apparatus according to claim 5, wherein a
2 further magnet is fixed to another interior
3 surface, said further magnet allowing the
4 apparatus to be magnetically mountable on a
5 metallic surface.
6
- 7 7. Apparatus according to claim 3, wherein an
8 opening is formed in the housing.
9
- 10 8. Apparatus according to claim 7, wherein the
11 opening comprises a circular portion and a slot
12 portion.
13
- 14 9. Apparatus according to any preceding claim,
15 wherein the metallic member is a ball bearing.
16
- 17 10. Apparatus according to any of claims 1 to 8,
18 wherein the metallic member is a coin.
19
- 20 11. Apparatus according to any preceding claim,
21 wherein ballasting material is provided to
22 stabilise the apparatus.
23
- 24 12. Apparatus according to claim 7, wherein the
25 ballasting material is sand.
26
- 27 13. Apparatus according to any of claims 1 to 10,
28 wherein the apparatus is stabilised by virtue
29 of the density of the material from which the
30 apparatus is made.
31

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- 1 14. Apparatus according to any preceding claim,
2 wherein at least one sheet receiving surface is
3 inclined.
4
- 5 15. Apparatus according to any preceding claim,
6 wherein the or each metallic member is
7 magnetically cooperable with its corresponding
8 magnet to thus hold and display sheet material
9 between the metallic member and the magnet.
10
- 11 16. Apparatus according to any of claims 1 to 13,
12 wherein the or each metallic member is fixable
13 to the rear surface of the sheet material to be
14 ~~held and displayed such that, when the sheet~~
15 material is held and displayed, the metallic
16 member is not visible.
17
- 18 17. Apparatus as hereinbefore described with
19 reference to the accompanying drawings.

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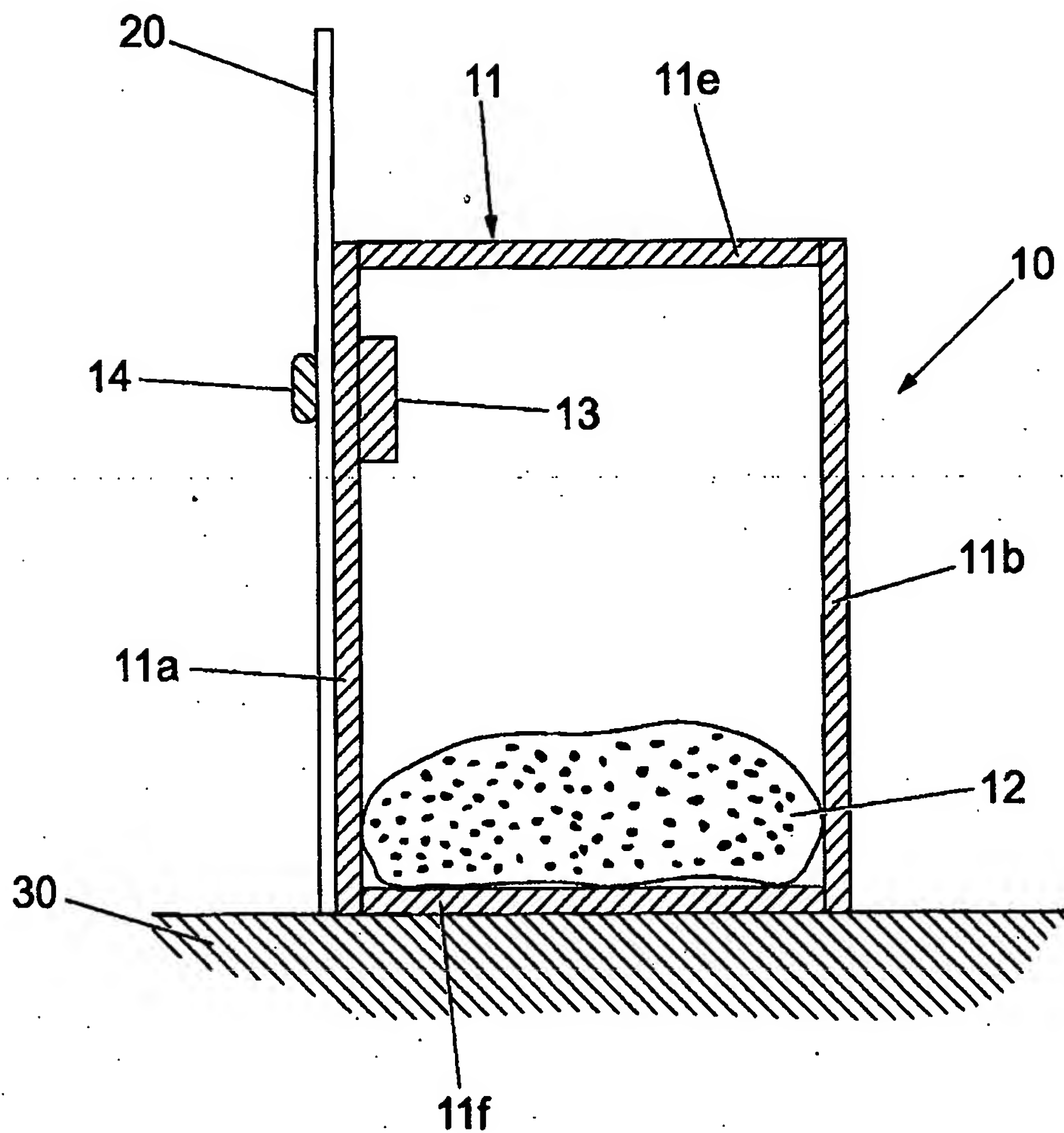


Fig. 1



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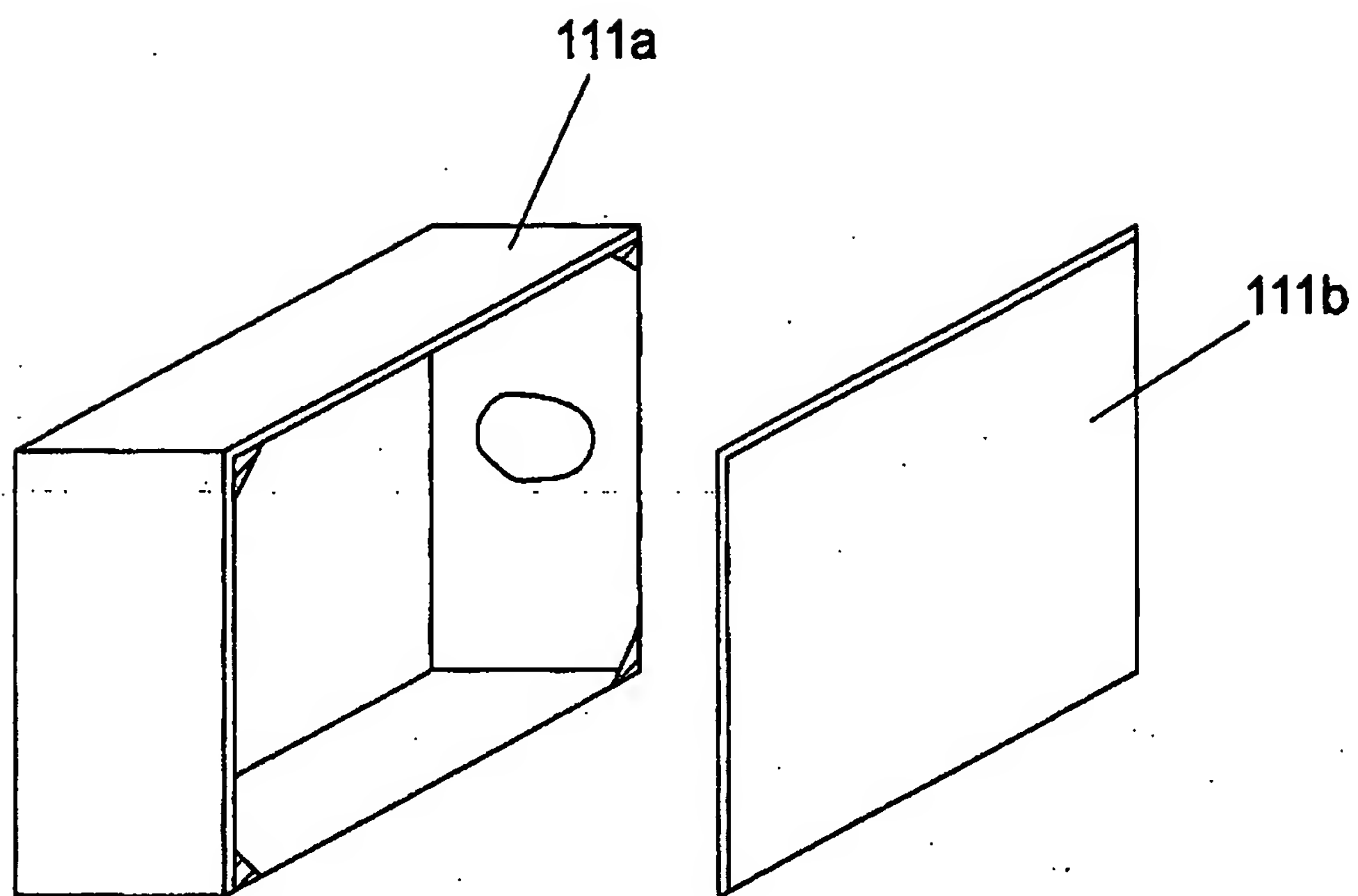


Fig. 3

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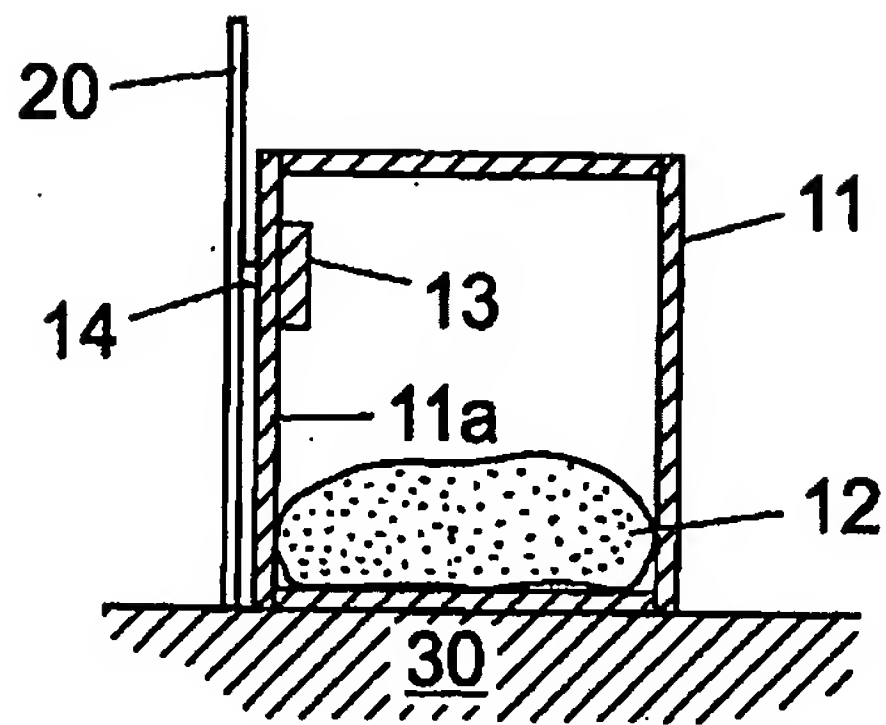


Fig. 4

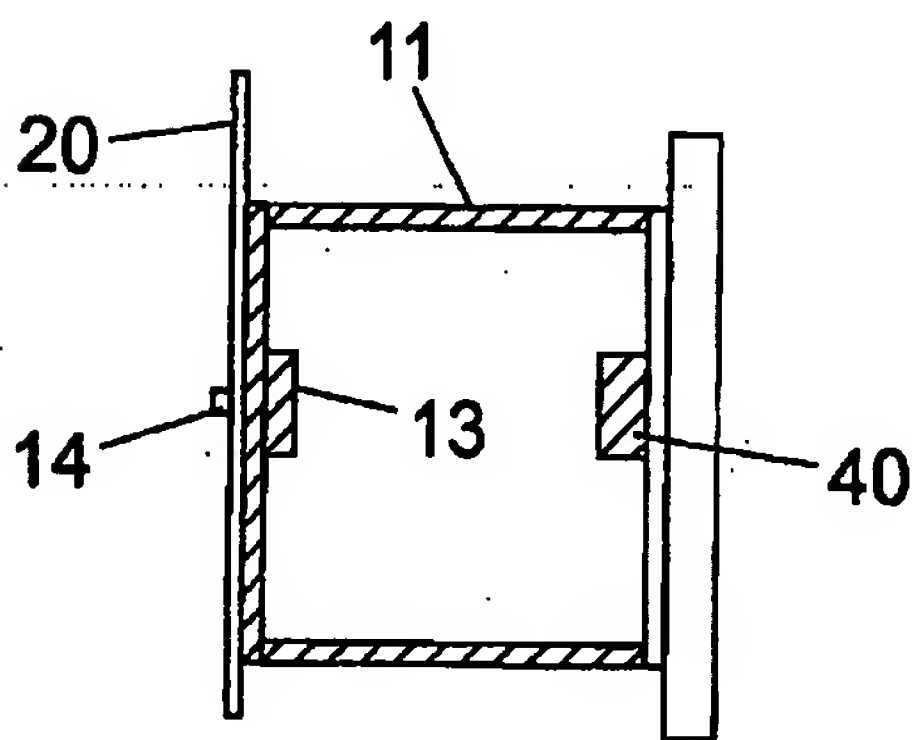


Fig. 5

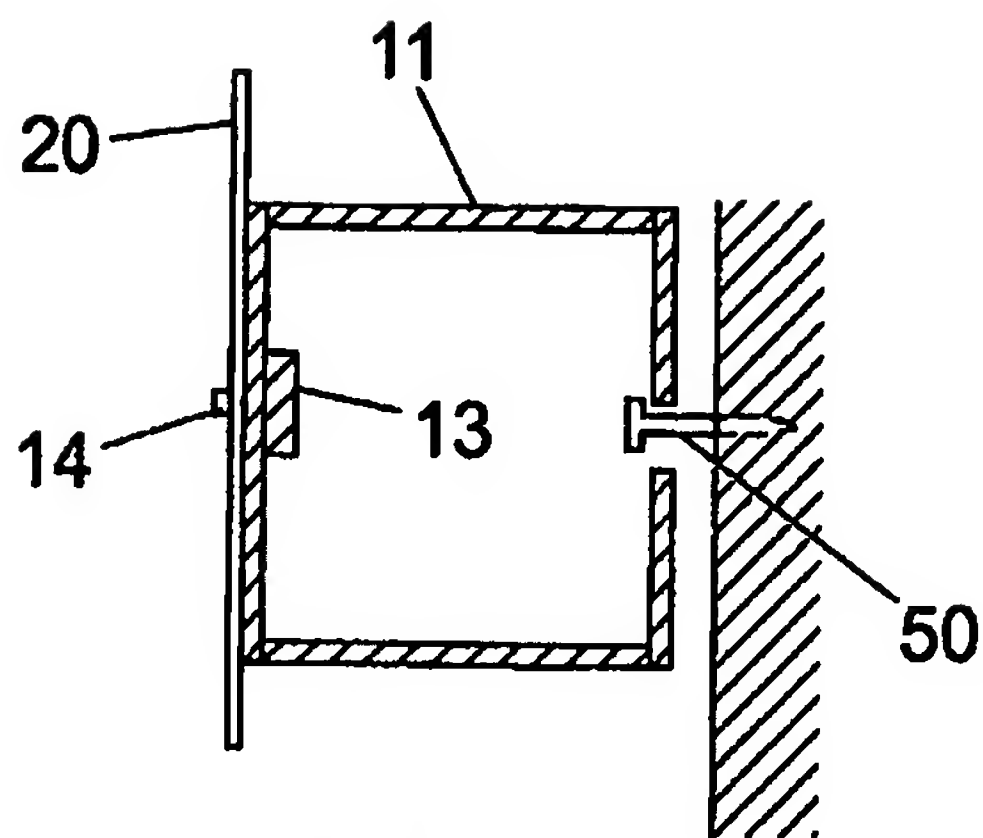


Fig. 6a

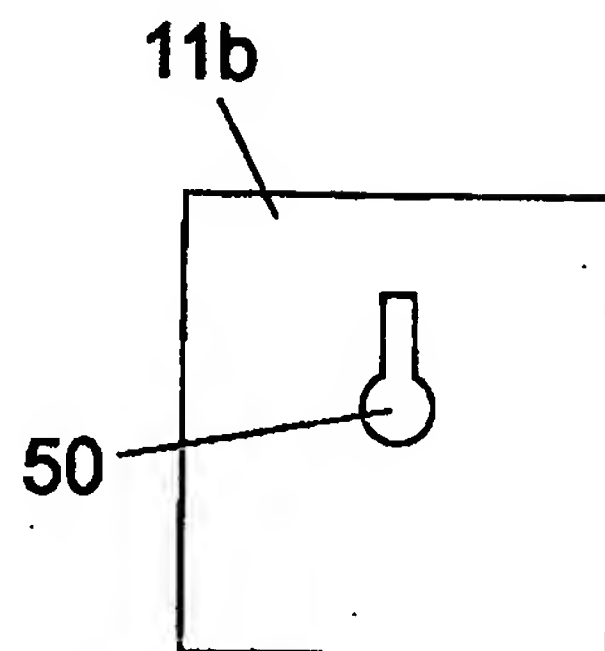


Fig. 6b